

REPORT ON BOILERS.

No. 99827

8 OCT 1941

Received at London Office

NEWCASTLE-ON-TYNE

Date of writing Report 10 When handed in at Local Office 4/10/41 Port of

No. in Reg. Book 36274 Survey held at Wallsend. Date, First Survey 24 March Last Survey 30 Sept 1941

on the S.S. EMPIRE WYCLIF (Number of Visits) (Gross Tons) (Net Tons)

Master Built at Sunderland By whom built Short Bros Ltd Yard No. 467 When built 1941

Engines made at Wallsend. By whom made N.E. Marine Eng Co (1938) Ltd Engine No. 3006 When made 1941

Boilers made at By whom made Boiler No. 3006 When made 1941

Nominal Horse Power Owners Ministry of War Transport Port belonging to Sunderland.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Co of Scotland Ltd. (Letter for Record S)

Total Heating Surface of Boilers 5730. Is forced draught fitted 400 Coal or Oil fired coal

No. and Description of Boilers 2 SB. Working Pressure 220

Tested by hydraulic pressure to 380 Date of test 18.8.41 (No. of Certificate 907. Can each boiler be worked separately yes

Area of Firegrate in each Boiler 67 1/2 No. and Description of safety valves to each boiler 1 Double.

Area of each set of valves per boiler (per Rule 15.25 as fitted 16.6 Pressure to which they are adjusted 225. Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork 5'-0" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 15'-11 1/16" Length 12'-4 1/2" Shell plates: Material Steel Tensile strength 29-33

Thickness 1 1/32" Are the shell plates welded or flanged no Description of riveting: circ. seams (end IR inter.)

long. seams T.R. D.B.S. Diameter of rivet holes in (circ. seams 1 9/16 long. seams) Pitch of rivets (4 3/8" 10 3/16")

Percentage of strength of circ. end seams (plate 62.1 rivets 48.4 Percentage of strength of circ. intermediate seam (plate rivets)

Percentage of strength of longitudinal joint (plate 85.5 rivets 86 combined 88.2. Working pressure of shell by Rules

Thickness of butt straps (outer 1 3/16 inner 1 5/16 No. and Description of Furnaces in each Boiler 3 cf.

Material Steel Tensile strength 26-30 Smallest outside diameter 47 1/4

Length of plain part (top bottom) Thickness of plates (crown 4 7/64 bottom) Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules

End plates in steam space: Material Steel Tensile strength 26-30 Thickness 1 1/2" Pitch of stays 25" x 20 13/16"

How are stays secured Double nuts. Working pressure by Rules 17 1/16" 7/8"

Tube plates: Material (front back) Steel Tensile strength 26-30 Thickness (17 1/16" 7/8")

Mean pitch of stay tubes in nests 8.7" Pitch across wide water spaces 14 1/2" x 7 1/2" Working pressure (front back)

Girders to combustion chamber tops: Material Steel Tensile strength 29-33 Depth and thickness of girder

at centre 11 1/2" x 1" double Length as per Rule 46 1/2" Distance apart 8 1/2" No. and pitch of stays

in each 3 @ 11 1/2" Working pressure by Rules Combustion chamber plates: Material Steel

Tensile strength 26-30 Thickness: Sides 25/32 5/64 Back 25/32 Top 25/32 5/64 Bottom 29/32

Pitch of stays to ditto: Sides 11 1/8" x 8 1/2" 9 7/8" Back 10 1/2" x 9 7/8" Top 11 1/8" x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules Front plate at bottom: Material Steel Tensile strength 26-30

Thickness 17 1/16" Lower back plate: Material Steel Tensile strength 26-30 Thickness 3 1/32"

Pitch of stays at wide water space 15 5/8" x 10 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure Main stays: Material Steel Tensile strength 28-32

Diameter (At body of stay or Over threads) 3 1/2" No. of threads per inch 6 Area supported by each stay

Working pressure by Rules Screw stays: Material Steel Tensile strength 26-30

Diameter (At turned off part or Over threads) 1 3/4 1 7/8 2" No. of threads per inch 9 Area supported by each stay



Working pressure by Rules _____ Are the stays drilled at the outer ends NO Margin stays: Diameter { At turned off part, or Over threads 2 1/2" }
 No. of threads per inch 9 Area supported by each stay _____ Working pressure by Rules _____
 Tubes: Material SD Steel External diameter { Plain 2 1/2" Stay _____ } Thickness { 8 LSG 7/16" + 3/8" } No. of threads per inch 9
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules _____ Manhole compensation: Size of opening in shell plate None Section of compensating ring _____ No. of rivets and diameter of rivet holes _____
 Outer row rivet pitch at ends _____ Depth of flange if manhole flanged _____ Steam Dome: Material None
 Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
 Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint { Plate _____ Rivets _____ }
 Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____ Working pressure by Rules _____
 How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell _____

Type of Superheater None Manufacturers of { Tubes _____ Steel forgings _____ Steel castings _____ }
 Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____
 Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off and the boiler be worked separately _____
 Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____
 Area of each safety valve _____ Are the safety valves fitted with easing gear _____ Working pressure as per Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: tubes _____ forgings and castings _____ and after assembly in place _____ Are drain cocks or valves fitted to free the superheater from water where necessary _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes

The foregoing is a correct description,
 THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.
 John Neill _____ Manufacturer.

Dates of Survey { During progress of work in shops - - } while building { During erection on board vessel - - }
 See Moby Report
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) _____
 Total No. of visits _____

Is this Boiler a duplicate of a previous case yes. If so, state Vessel's name and Report No. Empire Burton

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been made & installed under Special Survey in accordance with the approved Plan, the Specification & the requirements of the Rules

The materials & workmanship are good. & the boilers proved sound & tight under hydraulic & steaming tests.

Survey Fee ... £ See Moby Report } When applied for, 10
 Travelling Expenses (if any) £ _____ } When received, 10

R. C. Moffitt
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 17 OCT 1941

Assigned See Std. G.C. 33218

